

COMMENTS

The enclosed is responsive to the Examiner's Final Office Action mailed on November 12, 2008. At the time the Examiner mailed the Office Action claims 1-41 were pending. By way of the present response the Applicants have: 1) amended claims 1, 3-4, 6-7, 9-10, 14, 16-17, 19-20, 22-23, 27-29, 31-32 and 34-35; 2) canceled claims 5, 8, 11-13, 18, 21, 24-26, 33, 36-41 ; and 3) not added any claims. As such, claims 1-4, 6-7, 9-10, 14-17, 19-20, 22-23, 27-32 and 34-35 remain pending. The Applicants respectfully request reconsideration of the present application and the allowance of all claims now presented.

The examiner has maintained that all claims are anticipated by U.S. Patent No. 6,662,359 (hereinafter "Berry"). See Examiners Office Action, mailed November 12, 2008, p.2. In response, the Applicant has amended the claims to more clearly articulate the focus of the present application.

In particular, the Examiner's attention is drawn to Figure 12 of the Applicant's specification which is provided immediately below.

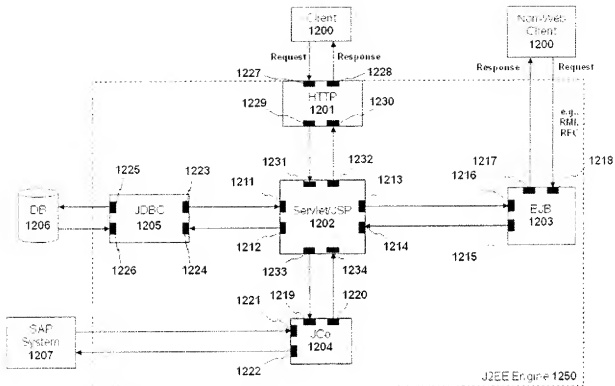


FIG. 12

Firstly, the above figure shows a number of different "services" within an application server (J2EE engine 1250). Specifically, the figure above depicts: i) a database connectivity service (JDBC 1205); ii) a transport protocol service (HTTP 1201); and, iii) a service that is implemented with a web page (servlet/JSP 1202) and a business logic component (EJB 1203). Moreover the above figure shows that the various services are interconnected through entry and/or exit points (1211, 1212, 1213, 1214, 1215, 1216, 1223, 1224, 1229, 1230, etc.). The Applicant's specification discloses that one strategy for tracing the inner working of an application server is to modify methods that contain entry and/or exit points between services ("entry and/or exit methods"). By tracing the activity of the interconnections, the invocation and use of the various services – and

therefore the interdependent behavioral patterns among the services within the application server – can be traced. Paragraph [0128] of the Applicant's specification states:

[0128] For the purpose of the present application, **Figure 12** is significant because it shows how specific entry/exit points between the various services/ components 1201-1205 may be tracked using the bytecode modification techniques described herein. For example, the individual methods highlighted in **Figure 12** may be selected for modification via a plugin such as the user-configurable plugin 820 illustrated in **Figure 8**. As the methods are executed, timing data and other information related to each of the methods (e.g., method parameters) are collected by the dispatch unit 430 and forwarded to the appropriate plugin handlers (e.g., handler 821). The handler(s) then forward the information to a GUI 453 or other output destinations for analysis. If a DSR plugin 830 is used, the dispatch unit 430 may forward the method information to an appropriate the DSR handler 831 which, in turn, may format and/or transmit the information to a specified DSR system via a DSR interface (e.g., such as DSR system 1055, and DSR interface 1040, respectively).

As such, independent claim 1 of the present application now recites:

identifying a group of services executed on an application server, said group of services including:

- a database connectivity service;
- a transport protocol service for a network that said application server is coupled to;
- a web based service that is implemented with a web page and a business logic component;

for each service in the group, identifying an interconnection to another one of the services in the group such that a plurality of interconnections are identified, each of the interconnections having respective entry and/or exit methods that correspond to entry and/or exit points to and/or from its corresponding service;

modifying bytecode of the respective entry and/or exit methods;

executing the group of services such that the interconnections are utilized;

and,

tracing invocations of the respective entry and/or exit methods.

In view of the above commentary, the Applicant respectfully submits that Berry is simply inapplicable against the Applicant's claims. Berry is directed to a much lower of level detail than the Applicant's application. Specifically, Berry is directed to a particular technique for modifying classfile bytecode and does not address techniques for tracing interdependencies amongst the larger services within an application server. Close examination of Berry reveals that Berry is directed to modifying bytecode so that a program's response to a detected error in the code ("exception") can be traced. See, e.g., Berry, abstract, col. 1, lines 34-52 and Figure 9.

It is perhaps possible that the approach of Berry could be used as part of the Applicant's "modifying" step in order to trace behavior in response to errors. However, Berry simply does not disclose specific placement of classfile modifications at methods that interconnect with larger scale application server services. Berry's specific low level bytecode modification techniques are in fact more comparable to the disclosure

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associated with Figures 5A/B – 8 of the Applicant's specification rather than Figure 12 of the Applicant's specification.

For purposes of considering double patenting issues, the Examiner's attention is also directed to the cross reference to related applications filed in the instant application and in particular to Applications No.'s , (10/750,044, 10/749, 757, and 10/749,740) which may also pertain to tracing techniques with an application server.

In light of the comments above, the Applicant respectfully requests the allowance of all claims.

Comments

If there are any additional charges, please charge Deposit Account No. 02-2666.
If a telephone interview would in any way expedite the prosecution of this application,
the Examiner is invited to contact Robert B. O'Rourke at (408) 720-8300.

Respectfully submitted,

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Dated: 2-12-09/

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